

**Abstract**

A process is described for producing a catalyst for gas-phase oxidations, in which a suspension of TiO<sub>2</sub> and V<sub>2</sub>O<sub>5</sub> particles is applied to a fluidized inert support, wherein at least 90% by volume of the V<sub>2</sub>O<sub>5</sub> particles have a diameter of 20 µm or less and at least 95% by volume of the V<sub>2</sub>O<sub>5</sub> particles have a diameter of 30 µm or less. The defined particle size distribution of the V<sub>2</sub>O<sub>5</sub> allows a high coating efficiency.